

SUBSTITUTE SPECIFICATION- CHANGES MADE

Appln. No. 10/031,872

Docket No. Q68112



ANTIROLL AND ANTI-PITCH SYSTEM FOR A VEHICLE, AND  
DEVICE FOR ITS IMPLEMENTATION

DESCRIPTION

Field of the invention

[0001] This invention relates to an antiroll and anti-pitch system for a vehicle, and to the devices for its implementation, specifically a system to be applied to vehicles provided with four sets of one or more wheels. The system either cooperates with the vehicle's suspension system or substitutes for the vehicle's suspension system in order to allow the four sets of wheels to keep contact with the ground and to keep an even distribution of load even if the vehicle is subject to uneven terrain. Where the sets of wheels are provided in a two-by-two manner, the sets that diagonally oppose each other are related in such a way that the loads created by the vertical movements of one of the sets are transmitted to the opposite set in order to transmit such a force that creates a similar movement in the vertical direction of the opposite wheel. The system cooperates with the suspension of the vehicle, or is substituted for the suspension of the vehicle in order to allow all of the vehicle's wheels to keep contact with the ground even if the terrain is irregular and prevents unwanted effects that are caused by the uneven terrain.

Entry  
Approved  
3/23/04

[0002] A vehicle suspension is built mainly with coil springs and resilient elements that bear the vehicle body and transmit its weight and the inertial forces to the wheels. This provides a means to absorb the vibrations caused by the travel of the vehicle over the road irregularities. Such springs and elastic elements are accompanied with shock absorbers in order to minimize the sprung movements and to avoid prolonged oscillations.

[0003] In addition to absorbing vibrations or shocks from the road surface, a vehicle suspension must provide a safe ride, keeping an optimal position in the straight trajectory, and vehicle safety during cornering.

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